

Serial number: 10/815,420

REMARKS

The Examiner has rejected claims 1-9 under 35 USC 112 as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Claim 1 was amended in the response of 31 Jan 2006 to clarify the fact that the two layers recited in Claim 1 as Layer-1 and Layer-2 are contained within a multi-layer film and disposed between a dicing tape and a silicon wafer. One skilled in the art would clearly understand that a "Dicing Die Bonding Film" is disposed between a wafer and a dicing tape and it is clear throughout the specification that this is the construction contemplated for this invention. Support for this amendment is found in paragraph [0002] last sentence, paragraph [0003] first and second sentences, paragraph [0007] first sentence, and paragraph [0038].

Claim 3 has been amended to correct the incorrect spelling of "thermoplastic". The applicant thanks the Examiner for pointing out this typographical error.

The amendment to the specification filed January 31, 2006 is canceled and Claim 4 is canceled. Claims 5-8 have been amended to remove their dependency to canceled Claim 4.

Paragraph [0038] of the specification has been amended to omit the phrase "irradiated with UV" from the first sentence. This phrase was included in error, as there was never any UV irradiation of any of the films or assemblies constructed for the examples. Support for this amendment can be found in Examples 1-4, as none of the film formulations included a photoinitiator. Further support is found in paragraphs [0028], [0032], [0034], and [0036] which specify that the dicing tape utilized was Adwill® G-64, which is a pressure sensitive dicing tape which is not UV-curable. Included with this response is a product data sheet for the Adwill G-series dicing tapes, showing that they are not UV-curable (in contrast with that company's D-series tapes which are UV-curable). This datasheet was retrieved from the Lintec web site. Further, included in this response is a declaration by the inventor, which verifies that there was never any UV irradiation utilized in any of the examples presented in the specification.

The Examiner has rejected claims 1-7 under 35 U.S.C. 103 (a) as being unpatentable over Akada et al (US5476565). Claim 1 has been amended to include the limitation that UV radiation is not required to enable release of the film from the dicing support tape. Support for the amendment to Claim 1 is found in Examples 1-4, in which the dicing tape utilized was a pressure sensitive adhesive type, which did not utilize UV irradiation to facilitate release.

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Applicant requests that the examiner remove all rejections in light of these amendments and remarks, and respectfully urges an allowance.

END OF REMARKS

Adwill® Products for dicing/die bonding process

D-series/G-series

D-series (UV Curable Dicing Tape)



The Adwill D-series tapes are revolutionary UV curable dicing tapes, changing their adhesive characteristics depending on operational process. Their initial strong adhesiveness secures wafers during dicing, and then is reduced by UV irradiation to facilitate pickup at die bonding. Perfect for wafer full-cut dicing to improve chip quality, and completely applicable to multiple sized chips.

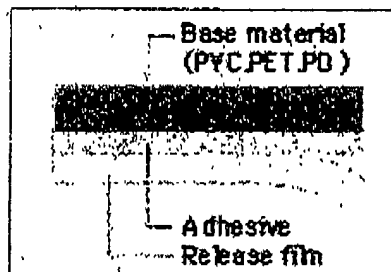
1. Secure wafers with strong initial adhesiveness to ensure dicing, without any slipping or peeling even for small chips.
2. Support instant control of adhesive strength by UV irradiation to allow even large chips to be picked up easily.
3. Cause no contamination by metal ions or by adhesive residue on the wafer surface, and no detrimental UV irradiation effects on ICs.
4. Prevent damage of chips due to contacts with superb expandability, which is not reduced by UV irradiation.
5. Provide a variety of tape grades ranging from a tape with reduced tape chips at high-speed full-cut dicing to a special tape for thin packages.
6. Support the adhesive processing environment that meets Class 100 (ANSI 209b) standards.

G-series (General Dicing Tape)

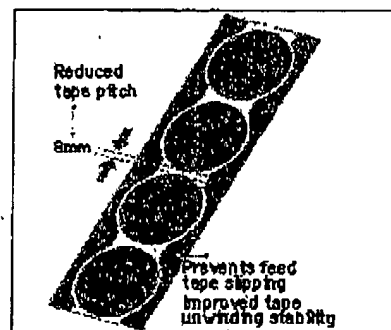


The Adwill G-Series is removable dicing tape with long-term stability. Adhesive strength remains stable after wafer mounting and heat application. This tape has superior expandability using a film with superb flexibility and expansion characteristics. It is applicable to multi-sized chips and offers high cost performance. It can be used in the adhesive processing environment that meets Class 100 (ANSI 209b) standards.

Tape structure (D-series, G-series)



Precut Tape



Registration of patent (No.1712427 Japan/No.4756968 U.S.A.)



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